

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings of claims in the application:

Claim 1 (Withdrawn): An electrophotographic photoreceptor comprising:
an electroconductive substrate;
a photosensitive layer located overlying the electroconductive substrate; and
optionally a protective layer located overlying the photosensitive layer,
wherein an outermost layer of the photoreceptor comprises a filler, a binder resin and
an organic compound having an acid value of from 10 to 700 mgKOH/g.

Claim 2 (Withdrawn): The electrophotographic photoreceptor according to Claim 1,
wherein the photosensitive layer is the outermost layer.

Claims 3-6 (Canceled):

Claim 7 (Withdrawn): The electrophotographic photoreceptor according to Claim 1,
wherein the organic compound has a number average molecular weight of from 300 to
30,000.

Claims 8 (Withdrawn): The electrophotographic photoreceptor according to Claim 1,
satisfying the following relationship:

$$0.1 \leq (A \times B/C) \leq 20$$

wherein A represents a content of the organic compound in the outermost layer in units of grams, B represents the acid value of the organic compound in units of mgKOH/g, and C represents a content of the filler in the outermost layer in units of grams.

Claim 9 (Withdrawn): The electrophotographic photoreceptor according to Claim 1, wherein the filler is an inorganic filler.

Claim 10 (Withdrawn): The electrophotographic photoreceptor according to Claim 9, wherein the inorganic filler is a metal oxide.

Claim 11 (Withdrawn): The electrophotographic photoreceptor according to Claim 10, wherein the metal oxide has a resistivity not less than $10^{10} \Omega \cdot \text{cm}$.

Claim 12 (Withdrawn): The electrophotographic photoreceptor according to Claim 10, wherein the metal oxide has a pH not less than 5 at an isoelectric point of the metal oxide.

Claim 13 (Withdrawn): The electrophotographic photoreceptor according to Claim 9, wherein the inorganic filler has a surface that is treated with a surface treating agent.

Claim 14 (Withdrawn): The electrophotographic photoreceptor according to Claim 13, wherein the surface is a surface treated with a surface treating agent selected from the group consisting of titanate coupling agents and aluminum coupling agents.

Claim 15 (Withdrawn): The electrophotographic photoreceptor according to Claim 13, wherein a ratio (W_s/W_f) of a weight (W_s) of the surface treating agent to a weight (W_f) of the filler is from 0.02 to 0.30.

Claim 16 (Withdrawn): The electrophotographic photoreceptor according to Claim 1, wherein the filler has an average primary particle diameter of from 0.01 μm to 0.9 μm .

Claim 17 (Withdrawn): The electrophotographic photoreceptor according to Claim 1, wherein the filler is included in the outermost layer in an amount of from 0.1 % to 50 % by weight based on total solid components of the outermost layer.

Claim 18 (Withdrawn): The electrophotographic photoreceptor according to Claim 1, wherein the binder resin comprises a resin selected from the group consisting of polycarbonate resins and polyarylate resins.

Claim 19 (Withdrawn): The electrophotographic photoreceptor according to Claim 1, wherein the binder resin comprises a charge transport polymer.

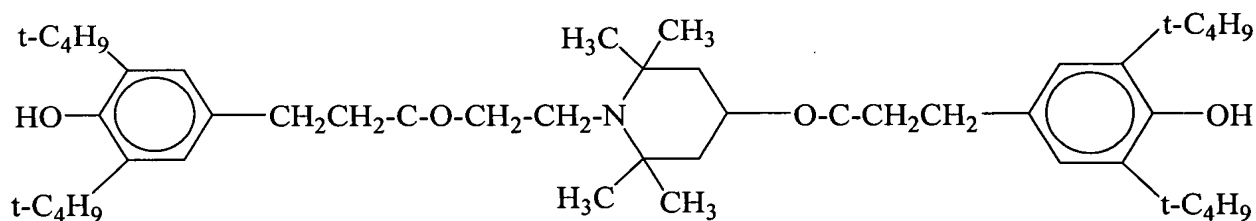
Claim 20 (Withdrawn): The electrophotographic photoreceptor according to Claim 1, wherein the outermost layer further comprises a charge transport material.

Claim 21 (Withdrawn): The electrophotographic photoreceptor according to Claim 20, wherein the photosensitive layer comprises a charge transport material, and wherein the charge transport material in the outermost layer has an ionization potential not greater than an ionization potential of the charge transport material in the photosensitive layer.

Claim 22 (Withdrawn): The electrophotographic photoreceptor according to Claim 1, wherein the outermost layer further comprises an antioxidant.

Claim 23 (Withdrawn): The electrophotographic photoreceptor according to Claim 22, wherein the antioxidant comprises both a hindered phenol structure and a hindered amine structure.

Claim 24 (Withdrawn): The electrophotographic photoreceptor according to Claim 23, wherein the antioxidant comprises a compound having the following formula:



Claim 25 (Withdrawn): The electrophotographic photoreceptor according to Claim 22, wherein the antioxidant is included in the outermost layer in an amount of from 0.1 to 20 % by weight based on the filler in the outermost layer, and wherein the amount is greater than an amount of the organic compound in the outermost layer.

Claim 26 (Currently Amended): A coating liquid for an outermost layer of an electrophotographic photoreceptor, comprising:

an alumina filler;

an organic compound having an acid value of from 10 to 700 mgKOH/g;

a binder resin; and

plural organic solvents;

wherein said organic compound is a polymer, copolymer or oligomer selected from the group consisting of ~~i) polymers having a saturated or unsaturated hydrocarbon skeleton and at least one carboxyl group, ii) copolymers having a saturated or unsaturated hydrocarbon skeleton and at least one carboxyl group, iii) oligomers having a saturated or unsaturated hydrocarbon skeleton and at least one carboxyl group~~ i) saturated polyester, ii) unsaturated polyester, iii) unsaturated polyester having a carboxyl group on its end portion; iv) polymers, copolymers and oligomers of acrylic acid, methacrylic acid, acrylate and methacrylate; v) styrene-acrylic acid copolymers, vi) styrene-acrylic acid-acrylate copolymers, vii) styrene-methacrylic acid copolymers, viii) styrene-methacrylic acid-acrylate copolymers, ix) styrene-maleic acid copolymers, x) styrene-maleic anhydride copolymers and [(iv)] xi) mixtures thereof;

wherein said coating liquid is prepared by mixing the filler, the organic compound, the binder resin and the plural organic solvents using a ball mill containing only alumina balls.

Claim 27 (Canceled):

Claim 28 (Withdrawn): A method for preparing an electrophotographic photoreceptor, comprising:

mixing a filler, an organic compound having an acid value of from 10 to 700 mg/KOH/g, and a binder resin to prepare an outermost layer coating liquid;

forming a photosensitive layer overlying an electroconductive substrate; and

coating the outermost layer coating liquid overlying the photosensitive layer by a spray coating method and drying the coated liquid to form an outermost layer overlying the photosensitive layer.

Claim 29 (Withdrawn): The method according to Claim 28, wherein the outermost layer coating step is performed at least twice.

Claim 30 (Withdrawn): An image forming method comprising:

- charging a photoreceptor;
- irradiating the photoreceptor with light to form an electrostatic latent image on a surface of the photoreceptor;
- developing the electrostatic latent image with a toner to form a toner image on the photoreceptor;
- transferring the toner image onto a receiving material optionally via an intermediate transfer medium,
- wherein the photoreceptor comprises:
 - an electroconductive substrate;
 - a photosensitive layer located overlying the electroconductive substrate; and
 - optionally a protective layer located overlying the photosensitive layer,
- wherein an outermost layer of the photoreceptor comprises a filler, a binder resin and an organic compound having an acid value of from 10 to 700 mgKOH/g.

Claim 31 (Withdrawn): The image forming method according to Claim 30, wherein the photosensitive layer is the outermost layer.

Claim 32 (Withdrawn): The image forming method according to Claim 30, wherein the irradiating step includes digitally irradiating light using at least one member selected from the group consisting of a laser diode and a light emitting diode.

Claims 33-46 (Canceled):

Claim 47 (Withdrawn): The electrophotographic photoreceptor according to Claim 1, wherein the organic compound comprises a hydrophilic group.

Claim 48 (Withdrawn): The electrophotographic photoreceptor according to Claim 47, wherein the hydrophilic group is a carboxyl group.

Claim 49 (Withdrawn): The electrophotographic photoreceptor according to Claim 48, wherein the organic compound is an unsaturated polycarboxylic acid compound.

Claim 50 (Withdrawn): The electrophotographic photoreceptor according to Claim 47, wherein the hydrophilic group is located at an end position of a molecule of the organic compound.

Claim 51 (Previously Presented): The coating liquid according to Claim 26, wherein said organic compound is selected from the group consisting of a saturated polyester, an unsaturated polyester, an unsaturated polyester having a carboxyl group on its end portion, polymers of acrylic acid, polymers of methacrylic acid, polymers of acrylate, polymers of methacrylate, copolymers of acrylic acid, copolymers of methacrylic acid, copolymers of acrylate, copolymers of methacrylate, oligomers of acrylic acid, oligomers of methacrylic

Application No.: 10/827,376

Reply to the Office Action dated: May 24, 2007

acid, oligomers of acrylate, oligomers of methacrylate, styrene-acrylic acid copolymers, styrene-acrylic acid-acrylate copolymers, styrene-methacrylic acid copolymers, styrene-methacrylic acid-acrylate copolymers, styrene-maleic acid copolymers, styrene-maleic anhydride copolymers and mixtures thereof.

Claim 52-57 (Canceled):

Claim 58 (Previously Presented): The coating liquid according to Claim 26, wherein the filler has a resistivity not less than $10^{10} \Omega \cdot \text{cm}$.

Claim 59 (Previously Presented): The coating liquid according to Claim 26, wherein the filler has a surface that is treated with a surface treating agent.

Claim 60 (Previously Presented): A coating liquid for an outermost layer of an electrophotographic photoreceptor, comprising:

- an alumina filler;
- a polycarboxylic acid having an acid value of from 10 to 700 mgKOH/g;
- a binder resin; and
- plural organic solvents.

Claim 61 (New): A coating liquid for an outermost layer of an electrophotographic photoreceptor, comprising:

- an alumina filler;
- an polycarboxylic acid having an acid value of from 10 to 700 mgKOH/g;
- a binder resin; and

plural organic solvents;

wherein said coating liquid is prepared by mixing the filler, the polycarboxylic acid, the binder resin and the plural organic solvents using a ball mill containing only alumina balls.

Claim 62 (New): The coating liquid according to Claim 26, wherein said organic compound is an acrylic resin, a styrene acrylic resin, an acrylic acid-hydroxyethyl methacrylate copolymer, a methacrylic acid-butyl methacrylate copolymer, a monocarboxylic acid ester compound having a carboxyl group at the end position, or a polyester resin, an ester compound having a carboxyl group at the end position.

Claim 63 (New): The coating liquid according to Claim 61, wherein said polycarboxylic acid is an unsaturated polycarboxylic acid polymer, a solution of a copolymer of an unsaturated polycarboxylic acid polymer with polysiloxane, or a polycarboxylic acid polymer.

BASIS FOR THE AMENDMENT

Claim 26 has been amended as supported at page 45 of the specification.

New Claim 61 has been added as supported by Claims 26 and 60.

New Claims 62 and 63 are supported by the Examples.

No new matter is believed to have been added by entry of this amendment. Entry and favorable reconsideration are respectfully requested.

Upon entry of this amendment Claims 1, 2, 7-26, 28-32, and 47-51, 58-63 will now be active in this application. Claims 1, 2, 7-25, 28-32 and 47-50 stand withdrawn from further consideration.